

PEREGRINE FALCON¹

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It has mainly been left to falconers to write about the life of the peregrine falcon, and make it known to the general public. Such knowledge of the peregrine as exists, has mostly if not exclusively come from the pen of falconers, because the best available information about these birds was evident to them long before modern ornithology got interested in falcons. From falconry we learn a great many things which could perhaps never have been known through other sources.

Falconers have written about other kinds of falcons also, yet the peregrine falcon and some of its subspecies have always remained a favourite with them, and in consequence more literature has been devoted to this group of noble birds. Since falconry enthusiasts have been able to study peregrine falcons very closely they have rightly been able to assess its intelligence and behaviour better than the modern scientific bird watcher whose contact with these falcons is generally through the medium of high powered binoculars. Ornithologists are likely to draw conclusions, by studying over a period of time, a single peregrine falcon. I feel it is incorrect to generalize from the observation of only a single or even just a few birds.

I have had first hand experience of quite a number of passage peregrines consisting of (a) *Falco peregrinus peregrinus*, (b) the Siberian falcon *F. p. calidus*, and (c) *F. p. brevirostris*³

group of birds. In addition to this I have trained and hunted with many other subspecies of the peregrine. In all cases, their highly specific predatory behaviour, including choice of prey, manner of attacking and despatching the victim, their habits and reactions to certain types of stimuli while held under training, provide ample clues to their varying evolutionary adaptations and consequent intriguing problems relevant to the special sort of training and hunting regimen demanded in each case. My experiments with all the species/types, of the peregrine tribe, and other hawks also, have revealed and clearly demonstrated a common decisive influence: the trainer's first social approach bearing heavily on the predator's emotional behaviour.

Distributed all over the earth, there are twenty three kinds of peregrine falcons. This is really surprising, since it has all along been taken for granted that crowding instinct alone is mainly responsible for the promotion of interbreeding of species. Crowding as we can see is a factor controlled entirely by the mobility of a group. In view of the free and unfettered mobility at the peregrine's disposal, the very idea of interbreeding and subsequent evolution of subspecies, may appear to the casual observer, a bit far fetched. However the phenomenon can be explained and understood if we examine the problem carefully.

In all my experience with these birds, I have known three kinds of passage peregrines that breed near, or as in one case, inside the Arctic circle, and all these three fly down south to hunting grounds in the tropics every year in

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³ This is one of the "forms" of *F. p. peregrinus* recognised by Menzbier 1892 — Eds.

the winter. Thus they freely migrate, from their breeding grounds to their winter quarters, and back, completing a double journey of almost ten thousand miles yearly. The three different types of passage peregrines that I have kept and trained vary little in size. Their respective colour schemes also vary but slightly. Their markings are similar and other characteristics more or less the same. Variation in size and colour is almost entirely caused by food habits and environmental factors and influences. Of the three peregrines mentioned above, *Falco peregrinus calidus* flies the longest distance every year. It breeds well within the Arctic circle, and flies down to and beyond the Persian Gulf as far south as Aden, every winter. Compared to the other two migratory peregrines I know, it is easily the biggest killer falcon.

Because of its signal killing capacity, this bird is highly prized by Arab falconers. There is an unending demand for it in the hawk markets of Kuwait and other Arab sheikdoms skirting the southern shores of the Persian Gulf. Rarely, I have seen stray birds turn up in the Punjab and the Indogangetic plain. During the past thirty years I have come across only four such falcons (*calidus*) that were trapped in the Punjab and western Uttar Pradesh. Detailed attention has been paid to this falcon elsewhere [See JBNHS Vol. 75 (3): 845-853]. Let us consider some of the factors responsible for the distribution and evolution of subspecies of the three distinct passage birds that have been mentioned earlier.

From time to time it has all along been observed by many falconers, and on many occasions I myself have also noticed it, that in certain years some individual passage peregrines will not fly back to breeding grounds from their wintering quarters. Twice I have seen adult passage peregrines in Mussoorie (W. Himalayas) during July; under normal condi-

tions these very birds ought to have flown back to their northern breeding grounds early in March. One of the peregrines was sighted in the vicinity of Gun Hill on Camel's Back road. I saw it for the first time when I was taking a stroll along Camel's Back road one fine morning. I got interested, and just to make sure that it indeed was a peregrine falcon I had seen, I revisited the spot the next day in the hope of getting a better look at my friend, should it still be in the area. I could easily find her on my second visit, and I spent almost a full hour studying her through binoculars. She was a large female peregrine in her third moult, and from that I could make out she probably was of the form *brevirostris*. The falcon had chosen a rock perch towering high up above Camel's Back road, just above the Christian cemetery.

There was hardly any traffic on this particular road then, though the hill season was in full swing, so the bird was not disturbed by the presence of human beings and remained comparatively unafraid. I was thus able to climb close to her perch, and to observe her in an atmosphere of comparative calm for nearly an hour each time on two successive days.

Kites and crows did not disturb her at all, but a Shaheen tiercel appeared the first day I was keeping watch. With grating screeches, in mock attacks he stooped at the peregrine several times. I suppose he was just trying, with amorous intent, to get to know the lady from the north a little better, or perhaps wished to drive the interloper away from his territory. Whatever it may be, he failed miserably for I could see that the peregrine was not in the least bothered by the attention that was thus being paid her.

Incidentally I have on several occasions witnessed the ritual aerial 'dance' of some male and female falcons. First, at a height of almost

five hundred feet above ground, the tiercel makes a few passes at the female falcon; then as both birds close in the female turns over on her back in midair and grabs the outstretched claws of the attacking tiercel, and thus with the claws locked together vehemently beating their wings and gyrating vigorously, both float down to eighty feet or so when they once again break apart.

In my opinion this aerial display, vocal and physical, serves to attract and appease both partners till eventually the pair gradually gets accustomed to each other and the bond is established. I have watched larger falcons (*Falco jugger*) that have been together and breeding for three or four successive seasons. They rarely indulged in such noisy aerobatics, and this may be due to the fact that the birds were known to each other. Of course the occasional bouts of display may have caused the falcons to attain some sexual stimulation, as this kind of behaviour could definitely cause acceleration of sexual excitation and connected reproductive processes.

Broadly speaking there are two groups of falcons: one comprises of the peregrine and its subspecies, the other group consists of the Saker falcon (*Falco cherrug*) and Gyr falcon (*Falco rusticolus*) type of birds. In my opinion, as a falconer, the Gyr, the Saker, and the Merlin falcon (*Falco columbarius*) and *F. chicquera* are close relatives. In the Saker and the Gyr falcon a close similarity can be seen not only in size and shape, but also in the fact that in both these birds, after each successive moult, the configuration of the streaks or elongated spots on the underparts from crop to belly does not change appreciably. On the other hand in the case of true passage peregrine and some of its subspecies as well, breast, crop, belly and back markings undergo significant changes with each succeeding moult. The elon-

gated breast spots become broad arrow heads, which later turn to bars as the falcon grows older. Feather edgings on wing-coverts and back disappear, and colour of the peregrine's head, as well as that of *peregrinator* falcons undergo perceptible changes.

For years I have off and on been keeping Saker falcons. Comparing these birds with Gyr falcon (I only mean pictures of the Gyr, since I have not had the pleasure of actually handling one of these singularly striking and noble birds) there is for all the world to see, yet another marked resemblance present. Toes in both these falcons, in proportion to their body size, are comparatively short and thick. The tarsus is also similarly short. It appears as if both these birds were intended by nature to be better adapted for perching on rocky outcrops and sand dunes in general. As for the tiny Merlin falcon (*Falco columbarius*) though there is a great difference in size between it and the Gyr or the Saker falcon, yet a significant character is common to all the three, namely, the tail pens or rectrices exceed the primary wing quills in length. This character is absent and lacking in the peregrine and all its subspecies. Also like its bigger cousin the Saker falcon, the Merlin does not change significantly after each moult. In addition if we compare the Merlin closely with the peregrines we will see that for a dainty little falcon of its size, its beak, like that of the Saker and the Gyr, is more broad based and powerfully built in proportion.

In places where the true passage Peregrine's wintering grounds overlap those of the Saker falcon, it is conceivable to me that on rare occasions when a Peregrine has not flown back to its nesting area, at the onset of the mating season, hybridisation of the two species may take place. This could have led to the production of the Lanner falcon which combines most

of the Peregrine's attributes with some of the Saker's. Actually like the Saker the Lanner Falcon is also not a migratory bird though some modern scientists prefer to call it a Peregrine subspecies. Only a local shifting of the Lanner falcon from one hunting ground to another is in evidence. Again like the Saker, the Lanner is always in its element in arid country bordering on desert land. With the Lanner falcon there is no appreciable change in back and frontal markings after each moult.

I once had a trained Lanner falcon which remained with me for four years. After three moults I found no difference in its original front and back markings and in those it acquired after three successive moults. However, unlike its 'ancestor' the Saker, the Lanner falcon's method of hunting, its habit of soaring aloft and waiting for game to break cover, and finally to my mind, the way it runs down its quarry, mostly striking it in midair, definitely betrays a peregrine ancestry. Its beak also is not broad based like that of the Saker's but built more like a peregrine's. It has long toes totally unlike the short stubby toes of a Saker.

When the Lanner (*Falco biarmicus*) in turn met the passage peregrine, the red-naped Shaheen (*Falco pelegrinoides*) was born. This bird is more Peregrine than the Lanner, and ranges in an intermediate zone — not quite as far south as the Peregrine's farthest wintering limit, but in a belt that borders on the Lanner's northernmost range. In some places, like in Baluchistan (Pakistan), I have found them comfortably sharing a common territory. The red-naped Shaheen is smaller than the Peregrine falcon in size, an adult female weighing one and a half pounds. However it is very solidly formed, broad breasted, and with short secondary feathers. Its toes are long like those of a Peregrine. After every moult, there is a

definite change noticeable in the markings on its breast and back, and in the colour of its head. In five or six year old birds this turns to a beautiful red tone, not unlike a Merlin falcon's head. I may add, however, that in the case of the Merlin falcon, the red extends down to the shoulder in juvenile birds, gradually recedes up the neck so that in five year old Merlins (and I refer to the redheaded Merlin) the head alone remains red in colour while the nape and shoulders turn grey. In the red-naped Shaheen falcon, the opposite is the case: as the bird gets older, first a red tint forms on top of its head which spreads progressively down its neck after each moult. The red-capped Shaheen is essentially a bird of scrublands and bare mountains. Local migration does take place when it flies to the nearest range of mountains for nesting. For example these falcons will be seen in winter in the Sindh valley, Pakistan, but they fly to the Sulaiman range of mountains to breed. This falcon seemingly having moved east of its most easterly limit, across the Indus river got to the Punjab area. It then started frequenting the Himalayas for nesting and breeding. In this part of the sub-continent the hills and plains directly below them are all luxuriantly wooded with pine and oak forests as a result of ample irrigation by snow fed streams and rivers from the Himalayas. Over a period of geological time, because of the local ecological conditions of such environment a dark phase of this falcon, the black Shaheen (*F. p. peregrinator*) has emerged. Its hunting technique has altered to suit the changed climatic and topographical conditions. The black Shaheen is quite similar in size to the red-naped Shaheen but differs immensely in its colour scheme. Every year upto the sixth moult there is a conspicuous change in the markings, and colouring in this bird. Age recognition after this, as in the case of the passage

peregrines and the red-naped Shaheen, is extremely difficult.

Between the far western form *babylonicus*, and its eastern counterpart *peregrinator* there exists yet an intermediate phase of the Shaheen falcon. I suppose this falcon is perhaps the first step in the evolution of the black Shaheen from the red-naped form. It is not as dark as the black Shaheen nor does it appear to be as light coloured as its red-naped 'ancestor'. With the passage peregrines and the *babylonicus* and *peregrinator* groups of falcons, it shares the common character of changing colour and feather markings with every successive moult.

I have attempted to describe only those true peregrine falcons and some of their subspecies that it has been my good fortune to study, keep and train for the practice of falconry. All my knowledge is therefore empirical and based on first hand experience. However in such matters as taxonomy and migration of the true passage peregrines, and other obscure phenomena, my hypotheses may be taken for what they are worth. Till better proof to the contrary emerge, I believe my assertions and suppositions will stand a good a chance of acceptance by the cognoscenti.